

Balsam have shown that fairly satisfactory results can be obtained with moth wings which have distinctly dark-colored veins. Since the prints are really negative in character the formation of a clear image of the wing vein is dependent on interference with the free passage of light rays. For this reason the wings of *Ctenucha virginica*, even though covered with dark scales, give excellent wing prints, due to the very opaque structure of the veins.

The use of the wing print in the classroom has been tried on a very small scale, but with good results. Students of systematic entomology had before them specimens of the particular insect they were trying to identify and also an enlarged print of the wing. On the print they were able to see distinctly the particular features of wing venation which the instructor wished them to note and then to locate them by the aid of a lens on the wing of the insect. In cases where a particular feature of wing venation has to be determined, in order to successfully use a systematic key, the enlarged print is useful to both instructor and student. When the particular feature has been once located a marked print can be kept at hand for quick comparison with the wings of other insects which the student is tracing through the systematic key, and in this way the time often wasted in searching for negative characters can be saved and doubtful determinations to some extent avoided.

---

#### UNDESCRIBED ERIOPTERINE CRANE-FLIES FROM ARGENTINA (TIPULIDAE, DIPTERA)

BY CHARLES P. ALEXANDER,  
Urbana, Illinois.

The following species of crane-flies belong to the extensive tribe Eriopterini. They were included in material collected by Dr. Charles Bruch and Engineer V. Weiser and sent to the writer for determination. The writer would express his gratitude to Dr. Bruch and Senor Weiser for the privilege of examining this interesting series of crane-flies.

##### **Erioptera (Erioptera) cladophoroides, sp. n.**

Similar to *E. cladophora* Alexander (Brazil); size much larger; body and legs darker colored.

*Male*—Length about 4.2 mm.; wing 4.3—4.5 mm.

*Female*—Length 4.3—4.5 mm.; wing 4.5—5.3 mm.

Rostrum reddish brown; palpi dark brown. Antennæ brown; flagellar segments in the male with elongate verticils. Head buffy, dark gray pruinose.

Mesonotal praescutum light gray with a broad brownish fulvous median stripe, the lateral margins of which are bordered with a series of dark brown setigerous punctures; tuberculate pits large, shiny black, separated by a distance a little greater than the diameter of one, situated entirely within the brown median stripe; pseudo-sutural foveae elongate, brownish black; a conspicuous subquadrate brown spot on the lateral margins of praescutum before suture; scutum light gray, the centres of the lobes light brown; scutellum light gray with a narrow brown median line; postnotum gray. Pleural region gray with a broad silvery gray longitudinal stripe, delimited ventrally and more broadly dorsally by narrow brown stripes. Halteres testaceous. Legs with the coxae

gray pruinose; trochanters testaceous; femora dark brown, pale basally, with three narrow white annuli; tibiae with four black and four white annuli arranged alternately, the latter a little narrower than the former, the apical band white; metatarsi black, the intermediate third white; second tarsal segment white, the apex and remainder of tarsi black. Wings whitish subhyaline, the basal third more grayish; a faint gray suffusion beyond the cord; a narrow dark brown seam along the cord, small brown clouds at *h*, arculus, origin of *Rs*, *Sc*<sub>2</sub>, *Sc*<sub>1</sub>, tips of the longitudinal veins at the wing-margins; a brown cloud at the fork of *M*<sub>3</sub> plus *Cu*<sub>1</sub>, and a conspicuous mark near the wing-base behind vein *Cu*; veins pale, darkened in the infuscated areas. Venation: as in the *annulipes* group; a conspicuous spur near the tip of the strongly sinuous vein *2nd A* as in *E. cladophora*.

Abdomen brown, the sternites paler. Male hypopygium with two pleural appendages, the outermost profoundly bifid, the outer arm similar to the inner arm but a little shorter, both arms acicular; inner pleural appendage a slender chitinized arm that narrows to the acute blackened point. Gonapophyses slender, the tips blackened and slightly incurved.

*Habitat*—Argentina.

*Holotype*, ♂, La Plata, October 13, 1920 (C. Bruch).

*Allotopotype*, ♀.

*Paratopotypes*, 7 ♂ ♀, October 13-18, 1920.

Type in the collection of the author.

#### ***Molophilus cladocerus*, sp. n.**

Related to *M. honestus* Alexander; pleural appendage of the male hypopygium heavily chitinized, slightly beyond midlength forking into two subequal acutely pointed branches.

*Male*.—Length 4—4.2 mm.; wing 4.5—5 mm.

*Female*.—Length 5 mm.; wing 5.5 mm.

Rostrum and palpi brown. Antennae comparatively short, brown. Head light yellow.

Mesonotum light yellowish brown, unmarked with darker; lateral margins almost white; postnotum darker brown. Pleura testaceous, the dorsal region dark brown, continued to the postnotum. Halteres yellow. Legs with the coxae and trochanters yellow; remainder of the legs dark brown, the femoral bases yellow. Wings with a strong yellowish tinge; veins pale brown, those in the costal region more yellowish.

Abdomen pale brown; hypopygium yellow. Male hypopygium with the apparent ventral appendage heavily chitinized, at a little beyond midlength branched, the inner branch only a little shorter than the outer or principal branch, both branches gradually narrowed to the smooth, acute points; remainder of the hypopygium almost as in *M. honestus*.

*Habitat*.—Argentina.

*Holotype*, ♂, Arroyo Famaila, Tucuman, altitude 400 meters, October 18, 1920 (V. Weiser).

*Allotopotype*, ♀, October 12, 1920.

*Paratopotypes*, ♂ ♀.

Type in the collection of the author.

**Gonomyia (Gonomyella) thiosema, sp. n.**

General coloration yellow; centre of the vertex dark brown; mesonotal praescutum with three broad stripes; median sclerite of postnotum broadly dark brownish black; pleura yellow with a narrow dark brown stripe; legs dark brown, the femoral bases paler; wings with a faint brownish tinge; male hypopygium with two flattened pale pleural appendages.

*Male*.—Length 5 mm.; wing, 4.8 mm.

Rostrum brown; palpi dark brown. Antennal scape sulphur-yellow; flagellum dark brown. Head obscure yellow, the centre of the vertex largely dark brown.

Pronotal scutum brown, yellowish laterally; scutellum sulphur-yellow. Mesonotal praescutum light brown, the lateral margins and humeral region yellow; a small brown spot on the lateral margin of sclerite; three broad dark brown stripes; scutum obscure brownish yellow, the lobes dark brown; scutellum brown, broadly margined with yellow; postnotum broadly brownish black medially, the anterior lateral regions yellow; lateral sclerites of postnotum yellow, the caudal margins brownish black, these areas lying immediately before the halteres. Pleura sulphur-yellow, narrowly striped longitudinally with dark brown; sternites reddish brown. Halteres dark brown, the basal half of the stem paler. Legs with the coxae yellow, the basal half of the fore coxae dark brown; trochanters yellow; remainder of legs dark brown, the femoral bases obscure yellow. Wings with a faint brownish tinge; veins dark brown. Venation;  $Sc$  long,  $Sc_1$  ending just beyond midlength of  $Rs$ ,  $Sc_2$  some distance from the tip of  $Sc_1$ , the latter alone about equal to  $r-m$ ;  $Rs$  long, very gently arcuated;  $r$  on  $R_{2+}$  at about two-fifths its length;  $R_2$  oblique, parallel to ultimate section of  $R_1$ , shorter than  $R_3$ ; petiole of cell  $2nd\ M_2$  about equal to cell; basal deflection of  $Cu_1$  a short distance beyond the fork of  $M$ .

Abdomen dark brown; sternites obscure brownish yellow. Male hypopygium with the pleurites stout; the proximal face densely set with a cushion of slender setiferous tubercles; apex of pleurite tipped with a short cylindrical lobe that is provided with a pencil of stiff yellow bristles. Two pleural appendages, the outer one very pale and flattened, the apex directed proximad; inner appendage shorter, more chitinized, flattened, on the face with two setiferous tubercles. Penis-guard stout, the apex simple.

*Habitat*.—Argentina.

*Holotype*, ♂, Famaila, Tucuman, October, 1920 (V. Weiser).

Type in the collection of the La Plata Museum.

**Gonomyia (Leiponeura) misera, sp. n.**

Rostrum reddish; antennae black, the enlarged second scapal segment a little reddish basally; general coloration pale brownish testaceous; pleura testaceous yellow; wings subhyaline, unmarked; male hypopygium with the outer angles of the pleurites produced into stout pale spines, the tips blackened and densely covered with short, appressed hairs; penis-guard stout, pale, longer than the remaining elements of the hypopygium.

*Male*.—Length 3.5–3.6 mm.; wing 3.8–4 mm.

*Female*.—Length 3.5–3.8 mm.; wing 4–4.1 mm.

Rostrum reddish; palpi dark brown. Antennae black, the enlarged

globular second scapal segment reddish brown basally; flagellar segments with very long verticils in the male. Head with front and anterior part of vertex reddish; remainder of vertex brown; genae and occiput obscure yellow.

Thoracic praescutum testaceous brown, unmarked; posterior sclerites of mesonotum obscure yellow. Pleura testaceous yellow. Halteres pale, the knobs obscure yellow. Legs with coxae and trochanters obscure yellow; remainder of the legs pale brown. Wings subhyaline, unmarked; veins pale brown. Venation:  $Sc_1$  ending far before origin of  $R_s$ , the distance from three-fourths to equal to length of  $R_s$ ;  $Sc_2$  some distance from tip of  $Sc_1$ ;  $R_s$  rather long, nearly straight; cell 1st  $M_2$  closed; basal deflection of  $Cu_1$  at or before the fork of  $M$ .

Abdomen light brown, the sternites and hypopygium a little paler. Male hypopygium with the ninth tergite conspicuous, semi-cylindrical, the caudal margin truncated or feebly concave, the lateral margins and angles with numerous short appressed spines; outer angle of the pleurite produced caudad into a stout pale spine which gradually narrows to the acute blackened point, this blackened tip covered with abundant tiny appressed hairs; pleural appendage shorter than this spine, its tip provided with several powerful bristles. Penis-guard pale, very stout at base, tapering to the pale flattened tip; penis-guard exceeding all other elements of hypopygium.

*Habitat*—Argentina.

*Holotype*, ♂, Arroyo Famaila, Tucuman, altitude 400 meters, October 12, 1920 (V. Weiser).

*Allotopotype*, ♀.

*Paratopotypes*, 8 ♂ ♀.

Type in the collection of the author.

#### **Paratropeza xystophanes, sp. n.**

Head and antennae black; mesonotal praescutum yellow with three black stripes; postnotum with the cephalic half obscure yellow; pleura black with a narrow yellowish longitudinal stripe; wings faintly brownish yellow, stigma triangular, dark brown;  $r$  near the end of  $R_s$ ; abdominal tergites brownish yellow with a narrow, median brown longitudinal line.

*Male*.—Length 7mm.; wing 8.6 mm.

Rostrum and palpi black. Antennae black. Head shiny black.

Pronotal scutum obscure yellow, indistinctly blackened anteriorly, scutellum yellow. Mesonotal praescutum shiny yellow with three broad shiny black stripes; scutum yellow, the lobes marked with black; scutellum light yellow; postnotum obscure yellow, the caudal half dark brown. Pleura black; a narrow yellowish longitudinal stripe extending above the coxae; a small patch of whitish appressed pubescence above the middle coxae and an extensive area on the metapleura. Halteres dark brown, the knobs conspicuously yellow. Legs with the fore coxae and trochanters obscure chestnut, the remaining coxae and trochanters more yellowish; fore femora brownish black with about the basal third more yellowish; remaining femora more uniformly brownish testaceous; tibiae brown, the tips a little darker; tarsi dark brown. Wings with a faint brownish yellow tinge; stigma triangular, dark brown, surrounding the radial crossvein; a very narrow and indistinct brown seam along the cord and

the outer end of cell 1st  $M_2$ ; veins dark brown. Venation: Generally similar to *P. jactans* Alexander (Brazil); *Rs* more arcuated; *r* close to the fork of *Rs*; basal deflection of  $Cu_1$  a short distance beyond the fork of *M*.

Abdomen shiny brownish yellow, the tergites with a narrow black median line; sternites clearer yellow; hypopygium darkened.

*Habitat*.—Argentina.

*Holotype* ♂, Quebrada Famailla, Tucuman, altitude 1,600 meters, October 16, 1920 (V. Weiser).

Type in the collection of the LaPlata Museum.

### ***Teucholabis omissa*, sp. n.**

Mesonotum obscure yellowish brown with three brownish black stripes; pleura black with a broad yellowish testaceous longitudinal stripe; wings faintly brown; stigma darker brown, subcircular; cell 1st  $M_2$  open by the atrophy of the outer deflection of  $M_3$ .

*Female*.—Length 5 mm.; wing 5.2 mm.

Head broken.

Pronotum yellow. Mesonotal praescutum obscure yellowish brown with three interrupted shiny brownish black stripes, the median stripe indicated only on the cephalic margin of the sclerite as a shiny area; lateral stripes narrower and less distinct; scutum obscure brownish yellow, the lobes marked with black; scutellum and postnotum obscure brown, covered with a short white pubescence. Pleura black with a broad yellowish testaceous longitudinal ventral stripe, passing beneath the root of the halteres; pleura with a short white pubescence. Halteres brown, the knobs obscure yellowish brown. Legs with the fore coxae dark brown; middle and hind coxae pale brown, whitish pubescent; trochanters obscure yellow; femora obscure yellow, the tips darkened; tibiae brown, the tips darker brown; tarsi dark brown. Wings comparatively narrow, with a faint brownish tinge; stigma darker brown, subcircular veins dark brown. Venation: *Sc* moderately long,  $Sc_1$  ending at about two-fifths the length of *Rs*;  $Sc_2$  lacking; *Rs* long, gently arcuated; *r* a short distance beyond the fork of *Rs*; petiole of cell 2nd  $M_2$  about one-half of this cell; cell 1st  $M_2$  open by the atrophy of the outer deflection of  $M_3$ ; basal deflection of  $Cu_1$  a short distance beyond the fork of *M*.

Abdomen dark brown, the basal sternites obscure yellow. Ovipositor with the basal shield black; valves of the ovipositor yellowish horn-color, strongly upcurved.

*Habitat*.—Argentina.

*Holotype*, ♀, Arroyo Famailla, Tucuman, altitude 400 meters, October, 1920 (V. Weiser).

Type in the collection of the La Plata Museum.

*Teucholabis omissa* is readily told from all described species of the genus, with the exception of *T. omissinervis* Alexander (Peru) by the open cell 1st  $M_2$ .